

## Birds on the Comoro Islands, April 1990

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Following the pioneering work of Benson (1960), the Comorian avifauna has been intensively studied by Belgian zoological expeditions (Louette 1988). Following fieldwork in Madagascar and Mauritius, we decided to visit the Comoro Islands to compare their fauna and flora, particularly by looking at various bird genera with western Indian Ocean radiations (e.g., *Zosterops*, *Foudia*, *Hypsipetes*).

We spent a total of 24 days on the Comoros, visiting all four islands. Our observations on the natural forest habitats visited, together with mammal and reptile observations, may be found in Evans & Safford (1991).

### Itinerary (all dates in April 1990)

- 2-7 Moroni, Grande Comore and adjacent plantations. RJS arrived (from Mauritius) on 2 April; MIE (from Madagascar) on 5 April.
- 8 Lift from Moroni to Boboni; walk up to La Convalescence.
- 9 La Convalescence to summit of Mont Karthala and back.
- 10 Forest around La Convalescence.
- 11 Forest around La Convalescence, then to Kourani via summit of Mt Karthala.
- 12 Around Kourani. Taxi-brousse to Moroni.
- 13 Moroni.
- 14 Boat to Moheli (Fomboni), 1230-1930 hrs.
- 15 Fomboni up to forested mountain ridge inland and back; then Fomboni beach and boat to Anjouan (Mutsamudu), 1800-2330 hrs.
- 16 Mutsamudu; taxi-brousse to Dindi; walk up to Lac Dzilandze.
- 17-18 Lac Dzilandze.
- 19 Lac Dzilandze to Dindi. Taxi-brousse to Mutsamudu. Boat to Mayotte (Dzaoudzi), 2230-0800 hrs.
- 20 Dzaoudzi and Mamoudzou.
- 21 Taxi-brousse Mamoudzou-Combani. Combani/Pic Combani area.
- 22 Pamandzi Lagoon.
- 23 Mamoudzou.
- 24 Walk from Dzaoudzi to Moya beach area and back.
- 25 Dzaoudzi to Pamandzi airport. Flew to Majunga (Madagascar).

### Systematic list

Records were thought to be worth including after perusal of Louette (1988), whose taxonomy and nomenclature are generally followed; however, in English names, we consistently use 'Comoro' instead of 'Comores' (e.g., blue pigoen *Alectroenas sganzini*) and Malagasy instead of Madagascar for species not endemic to that island (e.g., paradise flycatcher *Terpsiphone mutata*).

- \* = all records given  
 GC = Grande Comore (Ngazidja)  
 Mo = Moheli (Mwali)  
 An = Anjouan (Ndzuanani)  
 Ma = Mayotte (Maore)

***Tachybaptus ruficollis* Little Grebe\***

An: at least 3 adults in breeding plumage, one with two well-grown juveniles, Lac Dzialandze, 16–18 April.

***Puffinus lherminieri* Audubon's Shearwater\***

Sea: 7 on the approaches to Mo after 1600 hrs on 14 April, all heading for Mo in ones and twos.

***Phaethon lepturus* White-tailed Tropicbird\***

GC: 3 offshore S of Moroni, 14 April.

Ma: at least 6 off Moya beach; several heading inland c. 1 km S of Moya, 24 April.

***Fregata minor* Greater Frigatebird\***

GC: c. 6 off Moroni, 14 April, with *F. ariel*.

***Fregata ariel* Lesser Frigatebird\***

GC: c. 12 off Moroni, 14 April, with *F. minor*.

***Fregata* sp. Frigatebird sp.\***

Sea: 18 between GC and Mo on 14 April, including a group of 10 harrying a flock of Sooty Terns *Sterna fuscata* (q.v.).

***Egretta alba* Great Egret\***

Mo: one flying along coast at Fomboni, 15 April.

***Ardea cinerea* Grey Heron\***

Ma: 4 in Pamandzi lagoon, 22 April, and 1 at Moya beach, 24 April.

***Ardea humbloti* Madagascar Heron\***

Ma: an adult foraging in shallow water on the flat sand and coral-rock substrate in the small bay S of Moya beach, 24 April. It stalked about in a very animated fashion, often with the neck stretched up and bill and tail held horizontal, giving a curious goose-like shape, occasionally poising, half-crouched, before stabbing at a prey item. After pacing slowly about for several minutes, it flew forward 1–2 m and stabbed a sea snake or moray eel. The prey was 60–70 cm long, thickset and blunt at both ends, with little tapering, pale mustard yellow with many (15–20?) black dorso-ventral stripes or rings; the description suggests *Echidna zebra*, a distinctive moray eel (Muraenidae) of reef and coral, not uncommon in the western Indian Ocean (Bock 1978). The heron spent 4–5 min subduing its prey by squeezing, dropping and jabbing, concentrating on the head region, before swallowing it. The bird then rested immobile for 10–15 min before it was scared off by children.

***Milvus migrans* Black Kite\***

An: one at Mutsamudu, 16 April.

***Circus maillardi* Malagasy Harrier\***

GC: one gliding at treetop height or soaring higher over primary forest and the clearing at La Convalescence, 11 April.

Mo: one sailing about on updraughts above primary rainforest inland from Fomboni;

another over cultivation at Fomboni, 15 April.

An: one hunting over cropland near Dindi, 19 April.

***Falco eleonorae* Eleonora's Falcon\***

GC: one at c. 1000 m between Boboni and La Convalescence, 8 April. Louette (1988) mentions only 2 recent records, both in November.

***Coturnix coturnix* Common Quail\***

GC: 5 (including 3 calling) between 2000 and 2300 m, including birds in stunted, sparse *Philippia* heath, otherwise almost devoid of birds, 11 April.

***Gallinula chloropus* Moorhen**

An: none seen at Lac Dzilandze (or anywhere else); Benson (1960) saw 11 here in October 1958 but Louette (1988) found none in October 1983.

***Dromas ardeola* Crab Plover\***

Ma: an immature in Pamandzi lagoon, 22 April.

***Charadrius marginatus* White-fronted Sandplover\***

Ma: 2, probably a pair, watched closely (photographed), Pamandzi lagoon, 22 April. Louette (1988) gives 2 previous records for the archipelago, both on Ma.

***Sterna fuscata* Sooty Tern\***

Sea: a loose, linear flock of 240 in open sea midway between GC and Mo, 14 April; they were fishing for fry which were also being harried by a school of larger fish.

***Sterna bengalensis* Lesser Crested Tern\***

GC: 4 or 5 roosting groups totalling c. 300 on shore just S of Moroni, 14 April. Previously only small numbers recorded, in July, August and October (Louette 1988). :F7

Mo: 3 at Fomboni beach, 15 April. Louette mentions only one sighting, in November.

Ma: 20 seen from ferry between Dzaoudzi and Mamoudzou, 20 April, plus 100 unidentified terns, probably this species. A roost of c. 2500 non-breeding-plumaged birds (some in tail moult) in Pamandzi lagoon on 22 April is the largest group so far recorded for the archipelago; the previous largest group (600, considered to be a pre-breeding flock) was also on Ma in April (Louette 1988).

***Columba polleni* Comoro Pigeon\***

GC: a single and a pair at La Convalescence, 8–9 April; one in woodland near Kourani, 12 April.

***Streptopelia capicola* Ring-necked Dove**

Ma: at least 30 flew W to E across Pamandzi lagoon on afternoon of 22 April.

***Streptopelia picturata* Malagasy Turtle Dove**

GC/Mo/An/Ma: song was frequent in suitable habitat on all four islands, especially around La Convalescence (GC) and Lac Dzilandze (An).

***Turtur tympanistria* Tambourine Dove**

Ma: song, Combani, 21 April.

***Alectroenas sganzini* Comoro Blue Pigeon**

GC/An: song commonly heard (a deep, throaty, cooing *hrrowr*, rather 'strained'; usually 3–5 *coos* per phrase, at a rate of 1 *coo* per 1–2 s), La Convalescence (GC) and Lac Dzilandze (An). Many were in pairs. Courtship behaviour included display flights (flapping upwards then swooping down with wings outstretched) and a bowing display; both were typically columbid behaviour although the bowing display was particularly

animated, as the birds shivered their long, lanceolate neck feathers. One sunned its underwing in a treetop.

***Coracopsis nigra* Lesser Vasa Parrot**

GC: one in forest at La Convalescence clambered about one tree for 5 min feeding on leaves, nipping the edges of some, plucking others to hold in the feet to be partly eaten and dropped.

***Tyto alba* Barn Owl\***

An: one calling at 00:30 hrs in Mutsamudu, 16 April.

***Otus pauliani* Karthala Scops Owl\***

GC: at least 5 heard calling from forest during nights of 8 and 9 April at La Convalescence; calling started at 18:15 and 18:24 hrs respectively, at or soon after sunset.

***Zoonavena grandidieri* Malagasy Spine-tailed Swift\***

GC: up to 30 at La Convalescence, with much chasing and calling (a ticking trill), 8–11 April; one over *Philippia* zone, 11 April.

***Cypsiurus parvus* African Palm Swift**

GC: unusually high records (cf. Louette 1988) were individuals (seen well) at La Convalescence (1700 m) on 8 and 11 April, and one above there at 2000 m in the *Philippia* zone on 9 April; both localities were without palms.

***Apus barbatus* African Black Swift\***

GC: one over Mont Karthala crater, 11 April.

***Corythornis vintsioides* Malagasy Kingfisher**

Ma: a pair on beach S of Moya beach and a pair on the ferry ramp, Dzaoudzi, on 24 April; not before recorded on Pamandzi (Louette 1988). On both occasions birds were perching and fishing from flat rocks at the shoreline.

***Eurystomus glaucurus* Broad-billed Roller\***

An: one sallying from a dead tree for c. 20 min on rim of crater at Lac Dzilandze, 18 April; a rare migrant in the archipelago and this is the first outside October–November (Louette 1988).

***Leptosomus discolor* Cuckoo-roller**

An: 2 heard in Lac Dzilandze/Dindi area (none in crater), 17–19 April.

***Coracina cinerea* Ashy Cuckoo-shrike\***

GC: one in forest at La Convalescence, 10 April. A flock of 6, including one of the green phenotype and one in post-juvenile moult, loosely associating with *Hypsipetes madagascariensis*, *Terpsiphone mutata*, *Zosterops maderaspatanus* and perhaps *Foudia eminentissima* in woodland near Kourani, 12 April. The immature had pale fringing on the upperparts and wings producing wingbars, darker head and a few sparse breast streaks on a whitish background (similar to the immatures described by Cheke & Diamond (1986) in February 1975). The call was noticeably different from Madagascan birds (pers. obs.), but with the same 'structure': much less explosive, and quieter.

***Hypsipetes madagascariensis* Malagasy Bulbul**

***Hypsipetes parvirostris* Comoro Bulbul**

GC/Mo: good numbers of both species were seen, especially on GC, with the expected habitat segregation. We could not always distinguish them on plumage: the greener upperparts of *parvirostris* are apparent when skins of the two are compared, but on lone

birds in the field the yellow-washed underparts were the best distinction.

Louette & Herremens (1985) showed that in the western Indian Ocean the green *Hypsipetes* bulbuls (on the Mascarenes, Seychelles, and GC and Mo on the Comoros) and grey forms (on Madagascar, Aldabra, Glorieuses and all four Comoro Islands) can be separated by their 'cat-calls', but that the grey birds (*madagascariensis*) on GC sounded like the green birds (*parvirostris*) with which they overlap. However RJS, arriving from Mauritius (inhabited by the green *H. olivaceus*), found the calls of *madagascariensis* on GC instantly distinctive ("quieter, softer, less hysterical", "more metallic, higher-pitched" than *olivaceus*), but *parvirostris* sounded more like *olivaceus* ("more strident and wheezing" than *madagascariensis*). MIE, arriving from Madagascar and therefore 'tuned-in' to *madagascariensis*, agreed. The calls of *madagascariensis* on GC may be aberrant, but are still distinguishable from *parvirostris* there.

One *H. parvirostris* ate a fruit of *Rubus rosifolius*, La Convalescence (GC), 8 April.

#### ***Cyanolanius madagascarinus* Blue Vanga\***

Mo: c. 10 in forest/woodland above Fomboni, 15 April, including a male in a *Syzygium jambos* wood apparently trying to drive away a begging juvenile; though it could fly, the latter's tail and wings appeared not to be fully grown.

#### ***Turdus bewsheri* Comoro Thrush**

An: birds paired and 'sub-song' (tentative and short) heard, Lac Dzialandze, 17 April. Birds used all vegetation levels, but were often flushed from on or near the ground into trees, where they flew, fast and silently, from perch to perch.

#### ***Nesillas brevicaudata* Grande Comore Brush Warbler**

GC: all observations were made in primary forest around La Convalescence and in the *Philippia* zone.

One making begging noises and following another bird around with shivering wings was presumably a juvenile, La Convalescence, 9 April. Most were in twos and threes.

All were feeding 3 to 10 m up in the shrub layer or subcanopy. They usually hopped, often with the tail cocked, along mossy branches and trunks, from where they picked tiny invertebrates; they also jumped between foliage masses, and at least once were seen leaf-gleaning. Birds in the *Philippia* zone were forced to feed nearer the ground.

The most commonly noted call was a short, rather harsh, sparrow-like chirp, often given continuously; this must be the "low-pitched, sometimes well-structured, nasal 'peut'" described by Louette *et al.* (1988). Sometimes these calls were strung together, ending in a chatter, but much less staccato than *N. typica typica*; or a chirp was followed by a higher "tsziek" and then a short rattle on the same pitch as (or lower than) the first note, producing a unique three-note call.

#### ***Nesillas mariae* Short-tailed Brush Warbler**

*N. mariae* kept to the mid storey, jumping about on branches and tangles 2 m up or higher, behaving like *N. brevicaudata*. The distinctive voice included very loud chirps and a five-note phrase, and it was hard to believe that the loud, scratchy warbling song, likened to a sunbird *Nectarinia* or paradise flycatcher *Terpsiphone*, was coming from a species of *Nesillas*!

The differences in behaviour and voice between the two Mo taxa (seen side by side) correlated with the differences in appearance, especially the pale, cold, green, plain-faced *mariae* compared to the darker, browner *moheliensis* (with a fairly distinct supercilium about the eye).



***Nesillas typica* Malagasy Brush Warbler**

Mo: Both pairs of *N.t. moheliensis* were skulking in undergrowth close to the ground, giving simple, staccato calls, including a fast, 'machine-gun' rattle.

An: *N.t. longicaudata* was abundant in dense undergrowth around Lac Dzialandze, where it gave chacking and 'machine gun' calls, or hopped silently between vertical stems in the forest herb layer. It fed in flooded *Cyperus*/grass marsh by the lakeshore, or ascended to 3 m up trees (once 10 m up in the canopy) where one picked two 1–2 mm items from moss in a fork and another fed quite slowly, deliberately and silently along mossy branches.

Based on these brief observations, it seems that *longicaudata* and *moheliensis* have habits and calls like *typica* (pers. obs. of *N.t. typica* in Madagascar). *Brevicaudata* and *mariae* are more arboreal; their voices are more like each other than they are to the other forms, but are still distinct, as are their appearances. Our impressions were in perfect accord with the taxonomic arrangement of Louette *et al.* (1988).

***Humblotia flavirostris* Humblot's Flycatcher\***

GC: in forest at La Convalescence, different twos on 8 and 10 April and one on 11 April; another two on 11 April in low forest/*Philippia* mix between summit and Kourani (see *Zosterops mouroiensis*). One perched motionless 3–4 m up and sallied to the ground to catch a 2-cm caterpillar, beat it on a branch for two minutes before swallowing it, and ascended into the canopy. The call was a distinctive, 'icey', shivering trill, uttered by all the twos, once by both birds.

***Terpsiphone mutata* Malagasy Paradise Flycatcher**

GC: male re-growing tail streamers, La Convalescence, 11 April. Male had recently moulted tail streamers, Kourani, 12 April.

Mo: some males' tails half-grown, others fully grown, 15 April.

Ma: male re-growing tail-streamers, still less than half-grown, Combani; others with fully grown tails, 21 April.

***Nectarinia souimanga* Souimanga Sunbird**

An: paired and often seen hovering to nectar-probe *Lantana camara* flowers, Lac Dzialandze, where perhaps the commonest bird, 17–18 April. One or two juvenile males (?) were present, just starting to moult into adult plumage, but many breeding-plumaged males were seen, often chasing females; song was frequent. Nearly all *N. souimanga* seen at Ampijoroa and Perinet, Madagascar (26–30 April) were dull-plumaged.

***Nectarinia coquereli* Mayotte Sunbird**

Ma: nectar-feeding on papaya *Carica papaya* flowers, Combani, 21 April; song on 22 April.

***Nectarinia humbloti* Humblot's Sunbird**

GC: several singing around Moroni, 3–4 April. A free-flying juvenile begging with shivering wings and chasing two other birds, presumably parents, La Convalescence, 9–11 April. Nectar sources recorded were white flowers of *Cussonia cf. spicata* (Araliaceae), La Convalescence, 8 April, and *Eucalyptus* sp. (Myrtaceae), Moroni, 3 April.

***Nectarinia notata* Long-billed Green Sunbird**

GC: a male displaying by fluttering from tree to tree with head held high, giving loud buzzing calls, Moroni, 4 April. Nectar sources recorded (both around La Convalescence, 8–10 April) were cream flowers of a forest tree common at 1700 m (Sterculiaceae):

probably *Dombeya* sp.), and a presumably introduced honeysuckle (?Caprifoliaceae: *Lonicera* sp.) in the clearing.

#### *Zosterops maderaspatanus* Malagasy White-eye

GC: a typically (for a *Zosterops*) diverse set of feeding observations included 6 feeding on berries (c. 5 mm diameter) of bush, Moroni, 5 April; probing large inflorescences of *Cussonia* cf. *spicata* (Araliaceae) probably for insects rather than nectar, La Convalence, 10 April; hanging upside-down from *Usnea* lichen whilst probing into it; and gleaning through foliage.

An: one feeding on deep purple berries, (c. 5 mm diameter) Lac Dzilandze, 17 April.

#### *Zosterops mouroiensis* Karthala White-eye\*

GC: Two groups of ten and one of seven, plus four groups heard but not seen, between c. 1500 and 1800 m on southern flank of Mont Karthala (between Kourani and the summit) during continuous heavy rain on 11 April. All were in low, unstratified woodland (7–8 m canopy) colonising a recent lava flow and dominated by large *Philippia* but with broad-leaved shrubs also common; no birds were seen perching in or using the *Philippia*. The woodland on either side of the lava flow was taller, denser and broad-leaved, apparently without *Philippia*. The altitude was not determined precisely but IGN (1955) suggests that the ericoid vegetation on the lava flow extends down to 1220 m and we certainly recorded *Z. mouroiensis* below 1600 m. Louette (1988) noted overlap between the two *Zosterops* species between 1700 and 1900 m.

Flocks were restless and fast-moving, making virtually continuous progress through tree tops and mid-storey, birds keeping up a near-constant babble of quiet twittering, sometimes interrupted by short, sharp, much louder, slightly harsh and quite unfamiliar calls (alarm?). Behaviour and most calls seemed typical of *Zosterops* spp. in East Africa and Madagascar.

#### *Lonchura cucullata* Bronze Mannikin

GC: free-flying juveniles with adults, Moroni, 6 and 13 April.

An: c. 10 at Lac Dzilandze, 16–18 April, feeding in knee-high *Cyperus* sp. by the lakeshore; inland records are few (Louette 1988).

Ma: 5 at 200 m near Pic Combani, 21 April; records are everywhere rare (Louette 1988).

#### *Foudia madagascariensis* Madagascar Fody

GC/Mo/An/Ma: many males in full breeding plumage, 8–22 April, some in post-breeding moult to eclipse. A breeding pair (male in breeding plumage, singing and displaying) in the clearing at La Convalence, 8–11 April, demonstrated that the species disperses across forest.

#### *Foudia eminentissima* Comoro Fody

GC: many were seen in all areas visited (including outskirts of Moroni) except the *Philippia* zone. The two *Foudia* species partitioned the habitat as would be expected, e.g., a pair of *madagascariensis* inhabited the clearing at La Convalence, but only *eminentissima* was found in the surrounding forest; they occurred together in plantations with large trees or where the forest was fragmented. Around Moroni, *eminentissima* roosted in large trees (e.g., mango *Mangifera indica*) with House Sparrows *Passer domesticus*. They were best distinguished from *F. madagascariensis* (with which we are very familiar) by voice and structure.

One male was beginning to moult out of breeding plumage, 5 April; another, 12

April, had patchy red remaining; all other males were presumably in eclipse. Louette (1988) caught one moulting into breeding plumage in August 1981. This suggests that birds are usually in breeding plumage from about September to February or March.

Calls noted were the following:

- 1 A high-pitched, buzzing *tsieew* or *skeez*, reminiscent of the contact call of juvenile *madagascariensis*, but given by adult *eminentissima*; this was the commonest call, sometimes given when feeding.
- 2 A machine-gun-like *cha-cha-cha*....
- 3 A soft trill, heard only once.
- 4 A string of *jif* notes strung together in rapid succession, like the songs of *madagascariensis* or *rubra* in structure, but much 'richer' (see Horne 1987).

All feeding observations were of insectivory: birds hopped along or up lianes, twigs and small branches (sometimes reaching underneath) in the shrub layer or lower canopy, picking and probing in the bark crevices and abundant moss, often twitching 'nervously'; they also gleaned through the canopy. They could be inquisitive, responding well to 'pishing'.

Mo/An: of the handful seen, two males on Mo and one on An were still in breeding plumage. None was seen on Ma.

The feeding ecology, habitat, plumage, structure and timing of the breeding season of *eminentissima* (at least on GC, Mo and An) are all rather similar to *rubra* (Mauritius: see Cheke 1987 and Safford in press); however the differences (especially the calls: *rubra* is very distinctive) are large enough for them to be considered separate species, as indeed they generally are.

#### *Dicrurus fuscipennis* Grande Comore Drongo\*

GC: one near Kourani, 12 April, was growing new outer tail feathers; it was in 10–20 m high woodland (very degraded or secondary), perching on a shrub beneath the canopy.

#### *Dicrurus waldenii* Mayotte Drongo\*

Ma: 5 at c. 200 m on NW flanks of Pic Combani, 21 April: a group of 3 at the edge of a patch of native forest adjacent to a riverbank, and two at the interface between a thicket of non-native vegetation and an ylang-ylang *Cananga odorata* plantation. The three were moving together and were presumably a family party, one (perhaps juvenile) having a less well developed tail-fork; one of the two had at least one brown tertial and its primaries and secondaries were dull blackish-brown, so it too was probably a juvenile. Birds perched at all levels from canopy down to one metre above ground in the shrub layer, usually in areas abutting open airspace where they could make sallies after flying insects, but also foliage-gleaned (once) and twice perched in the crowns of coconut palms *Cocos nucifera*, seemingly attracted by the clouds of insects buzzing around the palms' flowers (one such insect was seen to be caught after the drongo had scrutinised the insects intently). The drongos gave quiet "quit" calls as they sallied.

The following species were also recorded: *Butorides striatus*, *Bubulcus ibis*, *Pluvialis squatarola*, *Charadrius hiaticula*, *Numenius phaeopus*, *Actitis hypoleucos*, *Arenaria interpres*, *Coracopsis vasa*, *Merops superciliosus*, *Saxicola torquata*, *Passer domesticus*, *Acridotheres tristis*, *Corvus albus*.



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A visit to the Comoros has always been a tough proposition for any biologist on a tight budget; during April, with Ramadan and the cyclone season to contend with, it becomes more an endurance test. We passed this test partly because of the help and advice of Richard Wilkinson (EEC projects, Moroni) and Chauffeur Ahmed Sa'id (our guide on Mount Karthala), and sincerely thank them, and also John Hartley for putting us in touch.

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